

# ActSafe ACC II Ascender





**ACC II Ascender User's Manual revision 1-2011**

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# INTRODUCTION

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## Foreword

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Thank you for choosing a product from Act Safe Systems AB®.

When used correctly this ascender will revolutionize the way you work at height. This hoisting equipment makes it much less stressful for you to reach your workplace in combination with lifting materials and tools.

## About ActSafe

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ActSafe offers you a full range of personal protective equipment (PPE), and comprehensive training in the use and handling of this equipment.

Visit our website for more information on ActSafe Power Ascenders. You will find important information and latest versions of manuals. [www.actsafe.se](http://www.actsafe.se)

## About this manual

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The information in this manual cannot replace training and exercise. The ascender must only be used by personnel who have undergone proper training. Improper use may result in serious injury or death.

### *Description of the manual*

Safety messages of extra importance are presented with the words danger and caution. The meanings of the signal words are:



#### **CAUTION**

Not following these instructions may result in **INJURY** or damage to the equipment.



#### **DANGER**

Not following these instructions may result in **SERIOUS INJURY** or **DEATH**.



#### **RECOMMENDATION**

User recommendation is described like this.

*Further information about consequences and other details is presented like this.*

#### **NOTE!**

The word "Note" will precede important information about the equipment used together with the ascender.

## Definitions

WORD	DESCRIPTION
Anchor	Attachment point for rope or ascender.
Ascending	Moving up on the rope.
Descending	Moving down on the rope.
Primary rope	Main rope used with ascender. Approved according to EN 1891.
Backup rope / Secondary rope	Safety rope that takes load if failure with primary rope. Approved according to EN 1891.
Fall arrest	Device that stops a fall and limits the load. Approved according to EN 353-2.
Active / Live rope	Rope that is loaded during work.
Passive / Dead rope	Unloaded rope during work.
User / Operator	Operator of the ascender, either by speed control handle or by remote control. There can be two or more at the same time.
Competent person	Personnel with adequate training and certification for the assignment.
Factor 1 fall	A fall of distance X m with X m of rope catching the fall. Fall factor is fall distance divided by length of rope catching it.

## DISCLAIMER

Since ActSafe Systems AB is unable to control the use of the equipment, the user and the user only is responsible for any damage, personal injuries or death resulting from improper use and maintenance of this product.

ActSafe Systems AB, including our distributors or working partners do not accept any responsibility or liability for payment due to damage, personal injuries or death resulting from use of uncertified personnel or the improper use and maintenance of this product.

The ascender is not safety equipment. It is a tool for hoisting and lowering a person and/or equipment. It must therefore always be used in combination with an approved secondary system including approved components for fall arrest.

The product must not be used by personnel that have not been certified by ActSafe Systems AB or our distributors.

This manual covers the basic features and use of the ascender only and does not replace adequate training and certification for working in rope access systems.

# SAFETY

Users of this product must have been certified or have undergone proper approved training either by ActSafe Systems AB or by ActSafe approved distributors.



## DANGER

Read this chapter carefully and make sure you understand its contents.

## Ascender safety

The ascender must not be used:

- For anything other than that for which it has been designed.
- In an explosive environment.
- If modified in any way by anyone other than ActSafe Systems AB.
- After a free fall from a height more than 1 meter against any hard surface.
- If subjected to a dynamic load as it is designed to work in static systems only.
- If subjected to mis-use in any way those parts or components may have been damaged.
- In combination with other than ActSafe original battery charger.
- In combination with damaged or modified battery charger.

Use only original spare parts / material recommended by ActSafe Systems AB.

*Other battery chargers may damage the battery and may cause development of toxic gases or in worst-case scenarios cause an explosion.*

If unclear of the condition of the ascender, it must be inspected and approved by ActSafe Systems AB or an ActSafe approved distributor before use.

The ActSafe Ascender and its equipment must be checked before and after every use and must be subject to at least one inspection per year (national regulations may require more frequent inspections).

## General safety measures

- Draw up a risk analysis and a minimum of 2 separate rescue plans.
- Make suitable rescue equipment available.
- Check all components in the system.



## RECOMMENDATION

Plan for rescue when rigging the rope system.

The area of risk under someone working at height is within a radius of 2/3 of the height and larger due to strong wind. Other persons must keep away from the area of risk.

Always secure tools and equipment.

## Work method analysis recommendation

This diagram is made for a general situation where the main operator (the operator primarily using the winch) and the 2nd operator (rescue personnel) are situated in different positions. Consider this as an aid in analysing the work situation and doing the risk analysis.

Traditional rescue methods refer to climbing/ascending the unloaded rope to the injured operator and lowering/descending to safety with the help of equipment.

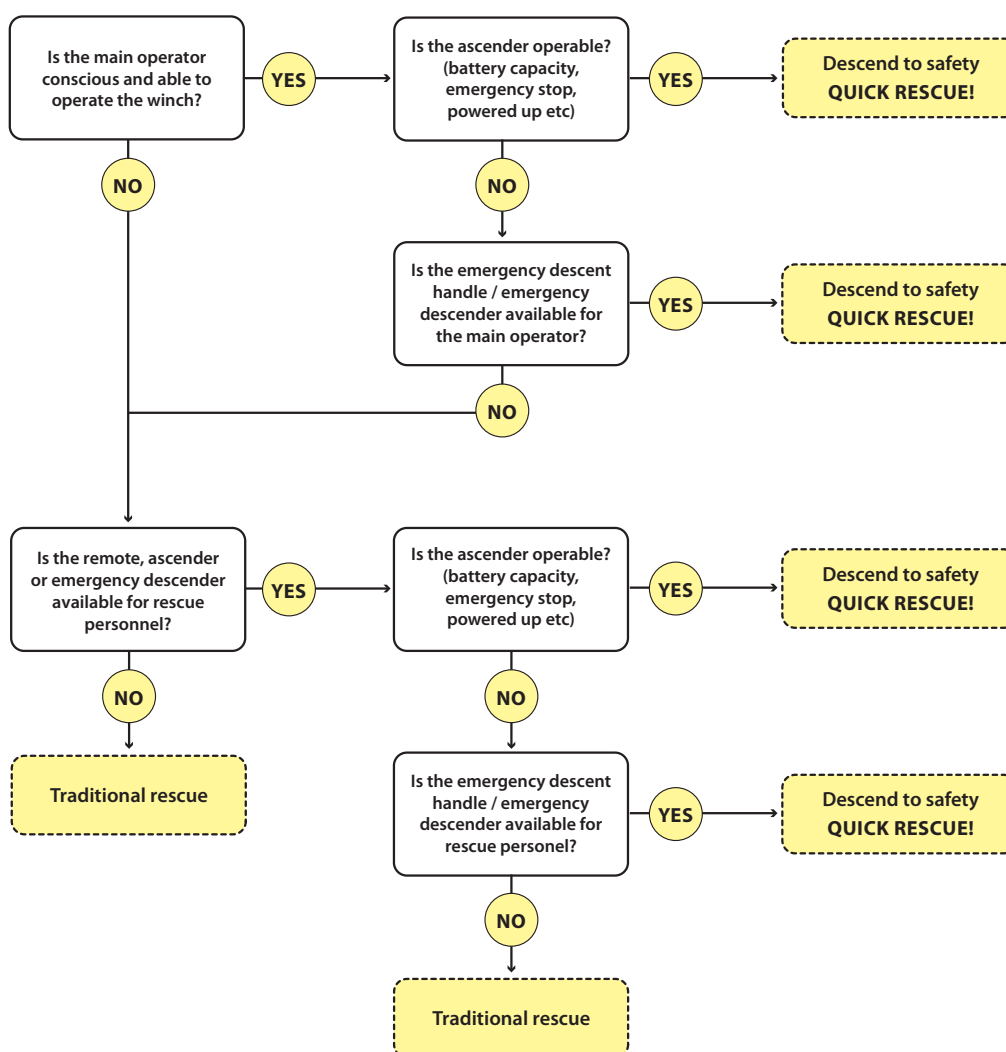
This will normally take longer than just descending directly without needing to access the injured person.



### RECOMMENDATION

Have 2 separate ways of controlling the ascender (direct and with remote, I'D or other). The backup operating method should be available to the 2nd operator/rescue personnel.

Start the assignment with fully charged batteries to minimise time and risk in case of an accident.





## Rope system safety

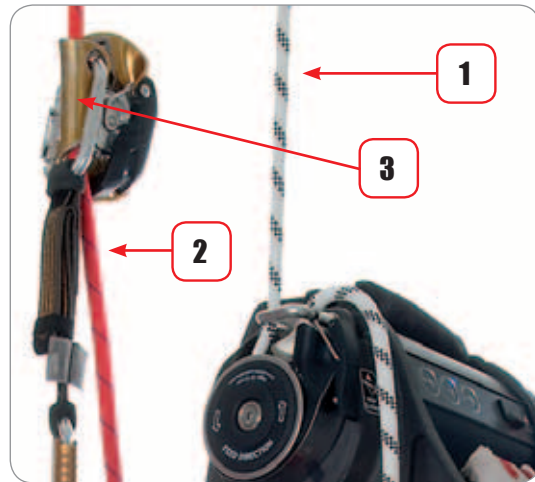
The rope system must consist of a primary rope (1) and a secondary back-up rope (2), both must be approved according to EN1891 and have a diameter of 10-13mm.

The two ropes must have separate anchor points that must hold at least 15 kN each. A competent person shall judge if the separate anchor points are sufficient. National regulations may require more.

The ACC ascends or descends on the primary rope. If any part of the load carrying system should break then the load is immediately transferred to the secondary rope which, together with the fall arrester (3) according to EN 353-2, provides a fall arrest system.

Do not descend on a twisted rope. It may result in a rope jam or in the worst-case scenario the rope being forced off the rope grab.

Rope characteristics are an important issue when using the ascender. Ropes with characteristics not suitable for the ascender might, in the worst-case scenario, result in a jam between the rope grab and the knife, with a damaged rope as a consequence.

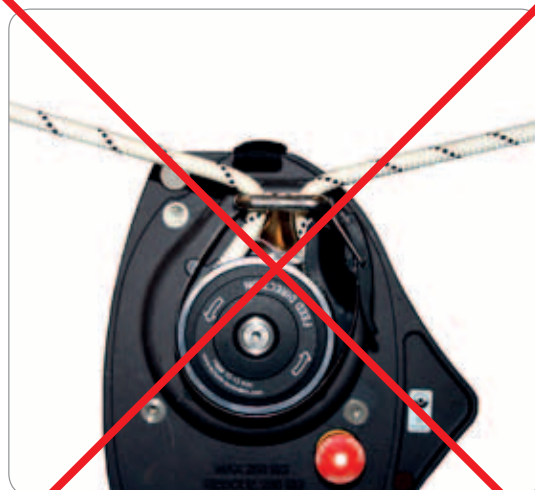


### DANGER

Do not use the Ascender without a backup system.

The lifting capacity of the ascender is higher than the Safe Working Load (SWL) of the most common fall arrest devices. Therefore, when lifting a load it may be necessary with separate fall arrest system(s) for the load. See the user's manual of the fall arrest device to find out the SWL.

The dead rope must be unloaded. Do not build cableways using the primary rope as shown in the picture.





## Rope recommendations

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ActSafe PME is designed for EN 1891 ropes. However, all EN 1891 ropes does not perform well with the ascender. ActSafe has tested a variety of ropes; please contact us for more information about different rope qualities.

Please read and understand the tips and directions regarding ropes below and you will get more out of your ropes as well as your ActSafe Ascender.

As a rule of the thumb one can say that extremely soft ropes don't get good grip in the rope grab. A very soft rope may result in poor lifting capacity since the rope starts to slip or in the worst-case scenario even a jam.

**NOTE!** *Not all EN 1891 ropes perform in a similar way. They have slightly different characteristics (stiff, soft, thick/thin mantle etc).*



### DANGER

A rope that has been in contact with acid must not be used under any circumstances. Scrap the rope!



### RECOMMENDATION

The user should carry out tests with the rope normally used prior to operations involving the ascender. Consult ActSafe for more information and assistance in the test of the rope.

A new rope will get an increased service life if it is put to soak in cold water before the first use.

Avoid getting sand or dirt onto/into the ropes since it will wear the rope grab and loop. Use a rope mat, rope bag or similar.

If the rope has been soiled by dirt, sand, gravel, oil or grease, consult your manufacturer on the proper action.

## Personal safety

The user must wear a combination harness (1,2) approved according to EN813: (low attachment point for the primary rope, 3) as well as EN361 (high attachment point for the secondary rope or fall arrester, 4).

Do not use the ascender if you are tired, ill or under the influence of alcohol, drugs or medication.



### ***Before use make sure that you***

- Check all components in the system.
- Use appropriate PPE (Personal Protective Equipment, for example helmet, gloves and protective eye wear, 5).
- Use appropriate clothes without loose hanging parts.
- If necessary bind long hair and beards to keep the shoulder region free.

### ***When using make sure that you***

- Pay attention and use common sense.
- Do not hold the rope just above the winch; there is a risk of being pinched.
- Keep your hands and feet off rotating parts.
- Avoid pendulum movement when starting to ascend.

## Training

Users of this product must have been certified or have undergone proper approved training either by ActSafe Systems AB or by ActSafe approved distributors.

The ActSafe ACC ascender makes it possible to access heights and depths in a very quick, safe and reliable way.

The ascenders are very easy to implement within various work methods and is invaluable in places where access is difficult

or impossible by other means. Because of the variety of use in different areas and circumstances training is essential.

Working at height or in locations presenting difficult or confined access requires great skill and such standards can only be achieved as a result of extensive training and regular refresher courses.

The below three different levels applies. Please consult your local ActSafe distributor for further information.

### **ASA Level 1 Basic PME Operator (1-day course)**

In this basic course we learn the user how to effectively use the ascender for basic operations in a safe and effective manner.

He/she is competent:

- to perform a pre-use checking
- in ascending on vertical rigged ropes
- in using the ascender as a winch
- in use of the ascender in a basic lowering system
- in rigging basic rigging
- in self-rescue
- able to identify and solve simple technical problems

A level one also has basic knowledge of international legislation in the field of rope access operations.

### **ASA Level 2 Advanced PME Operator (1 day course)**

In the advanced course we learn the user how to effectively use the ascender in more complex rope access and rescue operations.

Prerequisite for this course is a Level ASA 1 certificate.

He/she is competent:

- in all points of the level 1 syllabus
- in more complicated rigging
- in performing team rescue operations

### **ASA Level 3 Master Operator (5-day comprehensive course)**

In this comprehensive course we learn the user how to effectively use the ascender in basic-, complex- and very specific rope access and/or rescue operations. We teach the end user how to implement use of ascenders in their specific working environment. Techniques, legislation and procedures in one package. There is no prerequisite for this course as Level 1 and 2 are integrated.

He/she is competent:

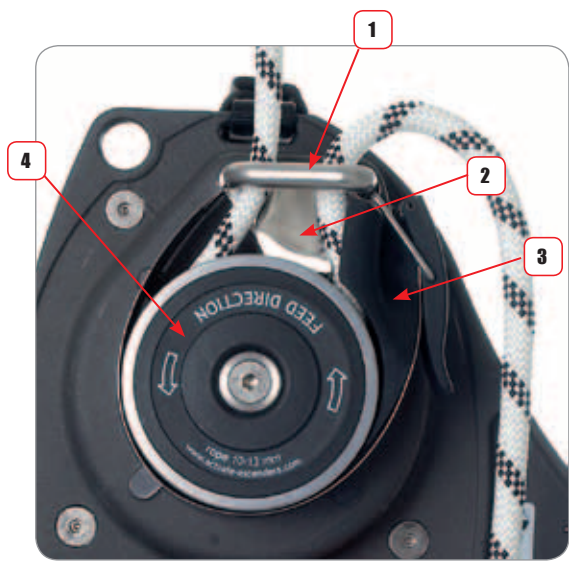
- in all points of the level 2 syllabus (more indepth)
- conversant with relevant work techniques and legislation
- implementing use of ascenders in existing working procedures
- use of the ascender in specific working environment (end user specific)

# SYSTEM DESCRIPTION



NO	PART
1	Rope grab system
2	Lifting handle
3	Control Panel
4	Pocket for Emergency Descender handle
5	Speed control handle
6	USB connection for service (inside)
7	Emergency stop

NO	PART
8	Primary connection (9+10)
9	Sling
10	Attachment karabiner
11	Chassis
12	Secondary Connection point
13	Charging Connector (hidden)
14	Accessories bag / for extra battery



NO	PART
1	Loop (Rope guide)
2	Knife
3	Rope cover
4	Rope grab with heat protection shield

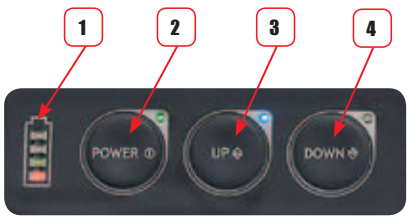
General

This ascender has been designed for lifting/lowering a person or load in a static rope system (including backup rope), with ropes of 10-13mm approved by EN1891. The dead rope shall be unloaded.

The karabiner in the primary connection can be replaced by any other karabiner approved by EN362. The sling in the chassis cannot be replaced, by anything other than an original spare part from ActSafe Systems AB.

Control panel

All buttons are equipped with LEDs that indicate the travel mode that is active.



NO	PART
1	Battery indicator
2	Power button
3	Ascend button
4	Descend button

## Battery

ActSafe ACC uses high power lithium ion batteries. The batteries are equipped with monitoring electronics that ensure safe operation and charging. These batteries can be charged at any time, no so called memory effect will reduce the battery capacity.



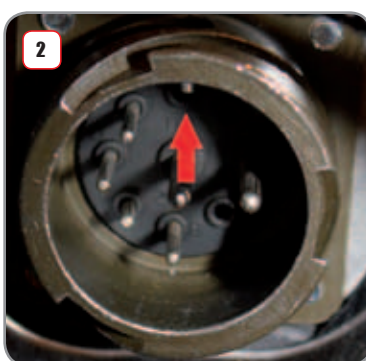
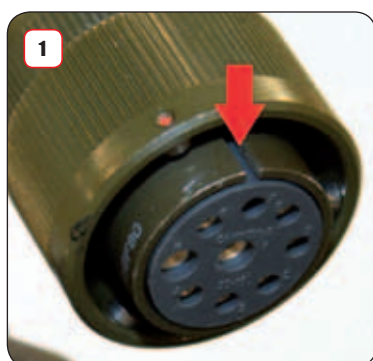
### RECOMMENDATION

ActSafe recommends having at least one extra battery when working in order to avoid undesired breaks as a result of a flat battery.



### Connecting the battery to the ascender

1. Align the slit of the battery connector with the top of the male connector placed inside the bag of the ascender.
2. Make sure the connecting pins are in the correct position.
3. Rotate the ring of the connector all way to the stop position in order to lock the connector in its place. There might be a small spark when connecting the battery. This is normal.



### Use in low temperatures

The capacity of the battery depends on the battery temperature. Extreme temperatures will affect the capacity, most noticeably in cold temperatures.

When the battery is cold it can behave as if the charge level is low. This may cause the battery indicator to show the wrong level. The indicator will return to normal after next recharge.



### RECOMMENDATION

When used in cold environments maintain the battery temperature by keeping the battery in the transportation box as long as possible. This will prolong the time before performance is limited.

When using the ascender with a cold battery, be aware that the initial lift speed capacity will be limited. It is only possible to ascend at lower speeds before the battery warms up and normal performance can be expected.



### *Use in high temperatures*

The capacity is less affected by high battery temperature. The lifted height will be slightly decreased. The ascender is well designed to do its work in the full temperature range. The risk of over heating is very small.

## Battery indicator

The battery indicator has 4 LEDs each representing 25% charge.

When connecting a fully charged battery to the ACC all LEDs of the indicator will be activated, i.e. indicating a full battery.

The battery indicator only functions correctly if a fully charged battery is connected. If a battery with less than full charge is connected the indicator will show the last known value, i.e. the indicator will show an incorrect value.

Cold temperatures (a cold battery) will affect the battery indicator and it might show a charge level lower than the actual of the battery.

LEDs	BATTERY CAPACITY
1 red 3 green	75-100%
1 red 2 green	50-75%
1 red 1 green	25-50%
1 red	0-25%





Remote control

The remote is primary a rescue tool, allowing another person to move the operator up or down in case of an emergency. However, the possibilities when using the remote in other applications are numerous. Such application shall be trained in a safe environment, and as always a back-up system shall be used.

The remote control allows the ascender to be operated from a distance. The remote control will override the control buttons on the ascender, i.e. when the remote is switched on it will not be possible to operate the ascender by its own controls. If the remote is not used it will automatically switch off after 10 seconds. The ascender will need to be switched on for the remote to function. When shutdown the ascender will be in standby mode for 4 hours allowing the remote to start it.



The remote allows ascending and descending at 2 different speed alternatives; slow and fast. (25% and 75% of maximum speed respectively)

When the ascender is powered off it can be reactivated from the remote control for 4 hours.

The remote control is not watertight. The protection class is IP65 (i.e. no ingress of dust and water projected by a nozzle against enclosure from any direction shall have harmful effect).



NO	PART
1	Ascend speed button
2	Activate button
3	Descend speed button
4	Slow speed LED (red)
5	Fast speed LED (red)
6	Power LED (green)

Several remote controls can be used with one ascender, of which only one can be active at each time. Contact ActSafe or your distributor for more information. When used with several remote controls the first one to contact the ascender will be active. To change remote, wait until the first remote automatically turns off.

The remote control holder is equipped with a full strength sling allowing it to be used to connect person or load. This sling is a part of the ascender system and cannot be used as a separate sling in other applications.



RECOMMENDATION

When ascending remote controlled with the ascender in the anchor, attach the remote holder to the harness and connect to the upper part of the remote holder sling to get an ergonomic operating position.

The remote shall have visual contact with the ascender to ensure maximal range.

## Emergency descent

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A brake is always engaged when power is switched off or when the speed control handle is at rest.

The emergency descent handle shall be used like any other descent device. The speed and descent distance shall be adjusted according to the circumstances. Use the emergency in normal speed.



### CAUTION

Emergency descending results in uncontrolled charging of the battery which may damage the battery. The risk is increased with a fully charged battery.

### Charger

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When the battery is at room temperature the charging time is approximately 3,5 hours.

The charger is not capable of measuring the charging level; hence it cannot determine when the battery is fully charged. For this reason the charger is timer controlled.

The charging consists of two cycles as described below:

1. Constant current charging. During this cycle the LED (on charger) is RED. This phase takes approximately 1 hour and 15 minutes. When the cycle is finished the battery is charged to 80 %.
2. Constant voltage charging. During this phase the LED (on charger) is YELLOW. This cycle is timer controlled in order to make sure that the battery is fully charged after the cycle is completed.
3. Charging cycle complete. The LED is GREEN.



#### **DANGER**

If the mains supply is interrupted several times during the second cycle (and the 4 hr timer reset) there is a risk of over charging, i.e. a risk of damaging the battery.

The timer of the second cycle is set to 4 hours, i.e. the total time for the two cycles are 5 hours and 15 minutes. Consequently the battery is fully charged before the LED on the charger shows a green light.

Note that if the mains supply is interrupted the charger will begin a new cycle. If the interruption occurred during the second cycle the charger will return to the second cycle but the timer will be reset and starts for 4 new hours.



### Over load and heat monitoring and protection

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The ascender is well designed for strenuous work with loads up to 200 kg. The risk of over heating is slim.

The load is monitored electronically and if the load exceeds 250 kg, the motor is switched off.

The internal temperature of the ascender is monitored continuously and performance (lift speed) is limited if there is a risk of over heating.

Overheating is however very unlikely to happen.

# USAGE

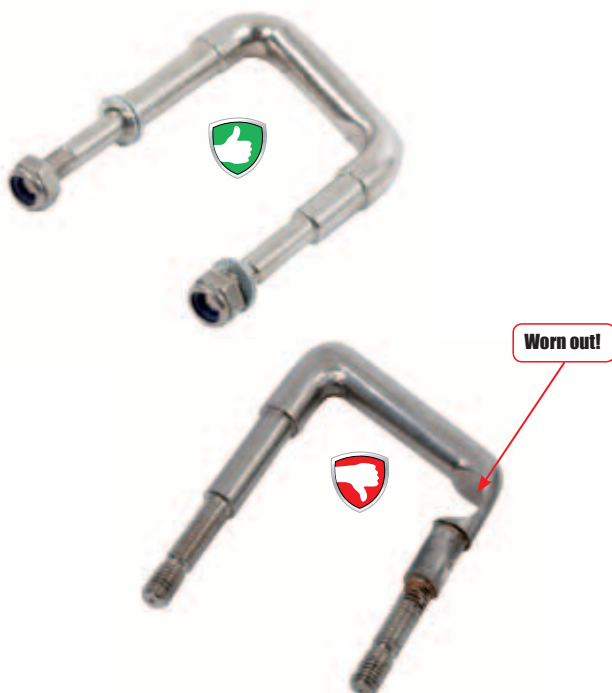
## Checklist before and after use

The user must make sure that the ascender is in full working order and the correct preparations have been made before each use of the ascender. If in doubt do not use the ascender and consult ActSafe or an approved distributor.

Check the ascender and its components for loose parts, excessive wear and damages. Damage includes cracks, marks and/or abnormal wear indicating the product has been subject to excessive force or impact energy.

Inspect the rope grab system in particular;

- The rope grab, for example the ridges, should be intact.
- The rope cover.
- The rope guide.
- The knife.



Further inspect

- The primary connection; the sling and the karabiner.
- The chassis, especially the area for the primary connection.
- That the ascender functions and controls are fully functional.
- The battery charge level is sufficient for the assignment.
- Annual inspection performed according to ActSafe's recommendations as well as national regulations.
- The battery charge level is enough for the assignment.
- All other parts.

If in doubt about the condition of the ascender consult either ActSafe Systems AB or an approved distributor.

Pay attention to the following points when assessing the work situation

- Rescue plan and rescue equipment available.
- Risk analysis performed.
- Backup rope system installed and the fall protection device (EN 353-2) attached to the front or rear connection point (EN 361) of the full body harness.

### DANGER

A broken loop will result in the rope to leave the rope grab with a free fall as the result.

Warning! The picture shows a loop that is worn to a dimension far from what is acceptable/safe.

## Connect to rope

Check that the live rope exits to the left and that the rope cover is fully closed.

Attaching the rope incorrectly can result in serious injury or death.

Always use the ascender with a backup rope system.



### DANGER

Make sure that the rope is attached correctly before use.



### RECOMMENDATION

Use the motor to facilitate when placing the rope around the rope grab.

Drive the ascender to waist level to simplify connection to harness.



1. Place the ascender on the ground
2. Open the rope cover.



3. Form a loop on the rope and push it through the rope guide just above the rope grab.



4. Put the rope around the rope grab
5. Close the rope cover.



6. Connect the primary connection karabiner to the EN 813:2008 connection point of the full body harness and check the karabiner is locked.

## Ascent & descent

1. Switch the ascender on.
2. Choose travel direction up/down.
3. Turn the speed control towards you to increase the speed.
4. Feed away the dead rope gently during the first few meters of ascent. After approx 5 meters the weight of the rope will be sufficient to “clean” itself from the ascender.
5. Stop the motion by turning the handle away from you or letting it go.

Always make sure that the rope feeds smoothly. During ascent make sure the outgoing rope is not blocked in any way. During descent make sure no twists pass the rope guide.

### *Twisted ropes, rotation*

Badly twisted ropes, e.g. as a result of the operator rotating/spinning during ascent/descent may be dangerous and should be avoided.

A badly twisted rope may cause a rope jam that makes the ascender non operable. In the worst-case scenario the rope can be forced off the rope grab, with serious injury or death as a result (if a back-up rope system is not used).



### **DANGER**

When descending, make sure the rope is goes cleanly in to the rope grab, i.e. that there are no curls or similar on the rope.



### **CAUTION**

Do not hold the rope just above the winch, there is a risk of being pinched.



### **RECOMMENDATION**

Stand straight beneath the anchor point in order to avoid a pendulum movement when starting off the ground.

Adjust the speed according to the circumstances, be aware and use common sense.

If balance is needed, hold on to the primary connection sling or karabiner.





## Remote control usage

The power for the ascender must be turned on (if not recently used).

1. Press any button on the remote to activate it. (The green LED will flash 3 times before going steady if connection with ascender is successful)
2. Press the down/up button once for slow speed, twice for fast speed.
3. Press the "Activate" button to ascend/descend at selected speed and direction.



### RECOMMENDATION

Be careful operating the remote if you don't have visual contact with the ascender.

Always use the remote in combination with a stop knot at each end of the rope.

The remote shall have visual contact with the ascender to ensure maximal range.



## Emergency stop

1. Press the emergency stop to immediately turn the ascender off.
2. Reactivate the emergency stop by twisting it clockwise.





## Emergency descent

Whenever the ascender is not running the mechanical brake is activated. This brake can be controlled manually to allow an emergency descent. The function should be treated as a normal descending device.

In most cases the emergency descent is not needed as the ascender can be restarted to allow normal descent with the motor.

1. Switch the power off.
2. Place a hand on the dead rope.
3. Descend by gently pressing the handle. to the side.
4. Stop the descent by letting go of the descend handle.

### DANGER

Emergency descending results in uncontrolled charging of the battery which may damage the battery. The risk is increased with a fully charged battery.

### CAUTION

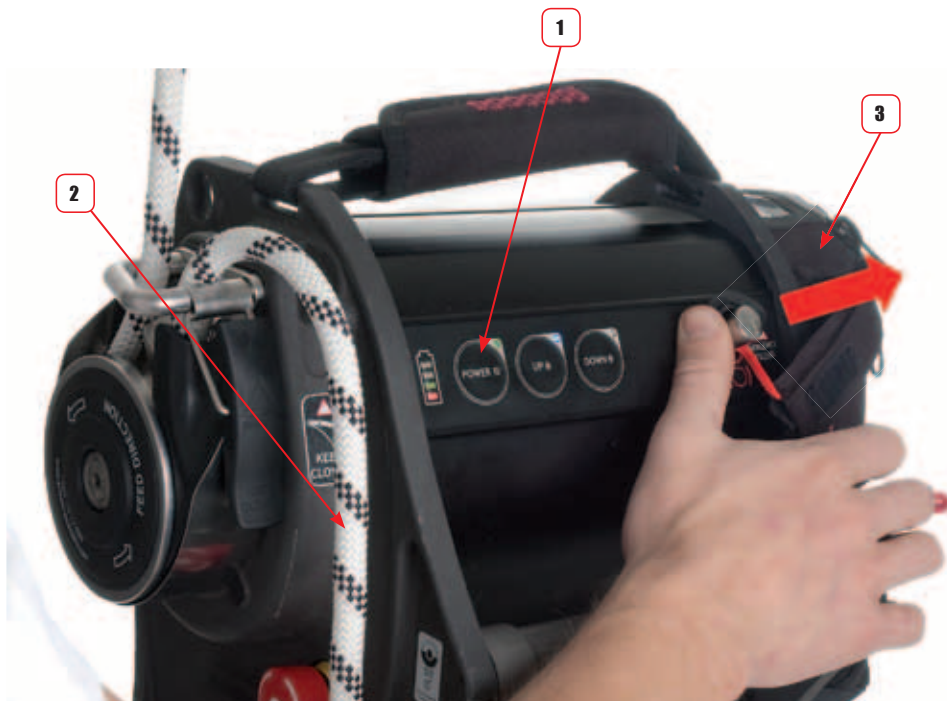
Do not use the emergency descender over very long distances.



### RECOMMENDATION

In most cases the emergency descent is not needed as the ascender can be restarted to allow normal descent with the motor.

Adjust the speed according to the circumstances, be aware and use common sense.



## Charging

**NOTE!** The ACC Mark II ascender does not have an internal battery like its precursor ACC I. All batteries are connected directly to the charger.

Charging can be done no matter whether the battery only is used a little or if it is completely empty. No so called “memory” effect will occur.

1. Connect the charger to the battery.
2. Connect the charger to the main supply.  
The LED on the charger will turn RED.



### CAUTION

Failure to disconnect the charger from the battery when the charger is disconnected from the mains supply will slowly drain the battery to a level where charging is no more possible.

When it after 1 hour and 15 minutes switches to yellow the battery has received 80 % charge. If necessary the battery can be disconnected and used at this point.

3. When the LED is showing green the charging cycle is complete. This occurs after around 5 hours.
4. Disconnect the charger from the mains supply.
5. Disconnect the battery from the charger.

**NOTE!** The battery indicator only functions correctly if a fully charged battery is connected. If a battery with less than full charge is connected the indicator will show the last known value, i.e. the indicator will show an incorrect value.



### RECOMMENDATION

The total charging cycle is all together around 5 hours. The battery is however fully charged already after 3,5 hours. The battery may therefore be disconnected after 3,5 hours, there is no need to wait until the LED shows GREEN.

## Transportation

For short transports, carry the ascender by the lifting handle.

During normal transport the transportation box is optimal as it protects the ascender from damage.

Always make sure the Ascender is secured before being transported in a vehicle.



### RECOMMENDATION

Use the transportation box to extend the service life of the ascender.

## Storage

Always clean and dry the ascender and the transportation box before putting it away for storage.

Store the ascender and the remote in a cool, dark and dry place. It can be stored in the transportation box, make sure it is dry.



### RECOMMENDATION

Make it a routine to charge the battery before putting it into storage so that you always have a fully charged battery when the ascender is taken into use.

## SERVICE & MAINTENANCE

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Use only original spare parts / material recommended by ActSafe Systems AB.

Clean the unit regularly. Check the charging pins and karabiners for oxidation. Clean and lubricate if needed.

### Clean the ascender

---

**NOTE!** Do not use running water, never use a high-pressure washer!

- Wipe the ascender with a wet cloth and let it dry.
- Clean the karabiner thoroughly, lubricate with thin oil.

### Clean the battery connector pins

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1. Remove the plug.
2. Spray the pins with a multi purpose lubricant such as "CRC 5-56" or similar.



#### RECOMMENDATION

Go through "Checklist before and after usage" at every maintenance to increase the safety for the user (/users) of the ascender.

## Changing the rope grab system



### DANGER

The below service must only be performed by ActSafe or an authorized ActSafe distributor.

1. Unscrew the rope guide (2 nuts).
2. Pull out the rope guide, lift up the knife with spacer washers.
3. Unscrew the rope grab, take off the heat shield (1 screw).
4. Pull out the rope grab with shims and the rope cover.

Replace any damaged parts.

5. If parts are not replaced, clean them before reassembling.
6. Put the rope cover, rope grab and heat protection shield on the axle, with the bolt tightened to 10 Nm and LocTite 243. Remount the original shims.
7. Put the knife, spacing washers and knife in place. Attach the rope cover to the rope guide. Tighten the nuts to 10 Nm. Make sure the Nordlock washers are assembled correctly.
8. Check that the knife is centred in the rope grab.



## Changing the primary connection sling

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If unsure of any of these steps, contact ActSafe Systems AB or local distributor.

- 1. Use pliers to force the captive bar out.
- 2. Remove the karabiner and the sling.
- 3. Push the new sling through the chassis holes. Use thin, long pliers to do this.
- 4. Connect the new karabiner and lock it with a captive bar.



## Remote control, changing the battery

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- 1. Remove the battery cap (2 screws).
- 2. Replace the batteries.
- 3. Reattach the battery cap (2 screws).



## Equipment list

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- Hex key 5mm – straight end
- Wrench 10 mm
- Phillips Screwdriver
- Thin, long pliers
- Torx T25 screwdriver
- Pliers and hammer

## Material

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- Thin Oil
- CRC 5-56
- Loctite 243

## Spare parts

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The most common parts are listed here, contact ActSafe Systems AB or your local distributor if you don't find your part here.

Rope grab	49-150-201
Cover	50-160-103
Knife	50-150-105
Loop	49-160-309
Sling	50-160-135
Karabiner	50-105-052

# TROUBLE SHOOTING GUIDE

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If this guide does not solve your problems, contact ActSafe Systems AB or by ActSafe approved distributor.

## *No power when main switch is pressed*

PROBABLE CAUSE	REMEDY
The emergency stop is activated.	Disengage the emergency stop.
The battery is flat.	Recharge the battery.

## *No response to speed handle*

PROBABLE CAUSE	REMEDY
The ascender is not switched on.	Switch the power on.
The remote control is switched on.	Restart the ascender or wait for the remote to turn off.
The battery is flat.	Recharge the battery.

## *The ascender stops on ascent/descent*

PROBABLE CAUSE	REMEDY
The ascender is overloaded.	Ensure the load is not exceeding lifting capacity and restart by return the handle to zero.
The rope is jammed.	Clear the jam.
The battery is flat.	Recharge the battery.



***The ascender switches off when newly recharged***

PROBABLE CAUSE	REMEDY
The battery is cold.	Let the battery heat up (can be done by running at low speed with load).
The charger is broken/damaged.	Repair/Replace the charger, contact ActSafe or an approved distributor.
The battery is flat.	The ascender is in need of repair and service, contact ActSafe or an approved distributor.

***Ascender operates at very low speed***

PROBABLE CAUSE	REMEDY
The battery is running low.	Recharge the battery.
The ascender is over loaded.	Lighten the load.

***The grab on the rope is poor, the rope slips***

PROBABLE CAUSE	REMEDY
Rope connected incorrectly.	Reconnect the rope.
The rope is not suitable for the ascender.	Change the rope.
The rope grab is worn.	The ascender is in need of repair and service, contact ActSafe or an approved distributor.

***The lifting capacity is notably weak***

PROBABLE CAUSE	REMEDY
The battery is cold.	Let the battery heat up (can be done by running at low speed with load)
The rope diameter is too big.	Change to recommended rope.

***The remote control cannot operate the winch when LED is green***

PROBABLE CAUSE	REMEDY
The distance to the winch is too far.	Move closer to the ascender or replace the battery of the remote.
There are objects disturbing the signal.	Move closer to the ascender to get a stronger signal.
The ascender is not powered up.	Turn the ascender on.
The ascender is broken/damaged.	Check the trouble shoot guide regarding the ascender.
Wrong remote control is used.	Change to correct remote control.

***The LED on the remote flashes red***

PROBABLE CAUSE	REMEDY
The battery is running low.	Replace the batteries of the remote control.
The remote is corrupt.	Consult ActSafe or an approved distributor.

***The charging process does not start, the LED on the ascender does not start to flash***

PROBABLE CAUSE	REMEDY
Charger not connected to main supply.	Connect charger to main supply, then switch it on.
Emergency stop activated.	Disengage the emergency stop.

***The ascender is very hot and there is no response to the speed handle or it operates at very slow speed***

PROBABLE CAUSE	REMEDY
The ascender is over heated.	Wait for the ascender to cool down.

## WARRANTY & GUARANTEE

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ActSafe is responsible for the proper function of the product during the warranty period. If a defect is detected while under warranty, the product will be repaired by ActSafe or an authorized Service Dealer.

The validity of the warranty must be proved by a copy of the invoice and the serial no. of the product.

The warranty period is 12 months after the date of purchase, unless otherwise agreed, and must be proved by the documentation mentioned above.

Repairs will be carried out by ActSafe or an authorized service dealer. Please contact ActSafe for your nearest service dealer.

### Limitation of liability

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The cost of transportation of the product to and from the Authorized Service dealer is the responsibility of the Customer.

ActSafe cannot be held liable for:

- Periodic inspection, maintenance and repair or replacement of parts as a result of normal use.
  - Consumption of consumable materials.
  - Modifications made without ActSafes authorization.
  - Defects due to modifications that have been made without the consent of ActSafe.
  - Costs due to the necessity of adapting or modifying the product as a result of new national or international standards.
- Repair under warranty will not be made if damage has arisen due to:
    - Improper use or abusive handling of the product.
    - Insufficient maintenance.
    - The use of spares and other parts that are not compatible with the product.
    - Repairs and modifications done by personnel not authorized by ActSafe.
    - Insufficient packing of the product when sending it to ActSafe or an authorized service dealer.
    - Accident, natural catastrophe or circumstances beyond the control of ActSafe.

# TECHNICAL DATA

**NOTE** The performance is tested with an unused 11 mm, unwatered rope at room temperature.

Speed, load, characteristics of ascent/descent will affect the battery capacity; in many cases the capacity may well exceed the XX meters on one charge.

PERFORMANCE/PART	VALUE	COMMENT
Rope	Static / Semi Static rope 10-13 mm EN1891	
Max working load	250 kg	
Safe Working Load (SWL)	200 kg	
Overload limit	250 kg (approx)	
Ascent speed	0-22 m/min	Continuous adjustment.
Descent speed	0-25 m/min	Continuous adjustment.
Emergency descent speed	0-25 m/min	Continuous adjustment.
Battery capacity	200 m with 120 kg load	At 20°C
Charging time	3,5 h	
Internal temperature range	-20 °C to + 50°C	
Over heating protection	Yes	
Weight	15 kg	Excluding battery.
Dimensions	38 x 25 x 30 cm	
Remote control range	Up to 100 meters	The remote shall have visual contact with the ascender to ensure maximal range.

# APPENDIX

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Declaration of conformity and EC Type test Certificate.



## Declaration of EC conformity

*In accordance with Machinery Directive 2006/42/EC, appendix II A*

ActSafe Systems AB  
Sagbäcksvägen 13  
SE43731 Lindome, Sweden

We hereby declare that the power ascender type ActSafe ACC (Mark II) for the lifting and lowering of loads and persons meets the fundamental requirements of the below stated EC directives:

**EC Machinery Directive 2006/42/EC**

**Low Voltage Directive 2006/95/EC**

*Including the associated amendments.*

Applied harmonized standards, in particular

**DIN EN 14492-1 Cranes - Power driven winches and hoists  
Part 1: Power driven winches (02.2007)**

Applied national directives, in particular

**BGR 159 Hochziehbare Personenaufnahmemittel  
(hoistable access equipment)**

The design was inspected by

Fachausschuss Maschinenbau, Hebezeuge, Hütten- und Walzwerksanlagen  
Prüf- und Zertifizierungsstelle im BG-PRÜFZERT  
BG-Bescheinigung Nr. 08 006

(Committee of experts - mechanical engineering,  
lifting gear, smelting works and rolling mills  
Testing and certification body in BG-PRÜFZERT  
BG-certification No. 08 006)

Lindome 2009-12-29

ActSafe Systems AB

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Managing Director

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www.actsafe.se  
VAT: SE556035133901

# SERVICE CARD

ActSafe Serial No:	
year of manufacture	
Date of purchase	
Date first put into service	
Name of owner	

Date of service		
DATE	INSPECTOR	OK

**ActSafe Systems AB**  
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.....  
Signature

Distributor:



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